FIG. 1

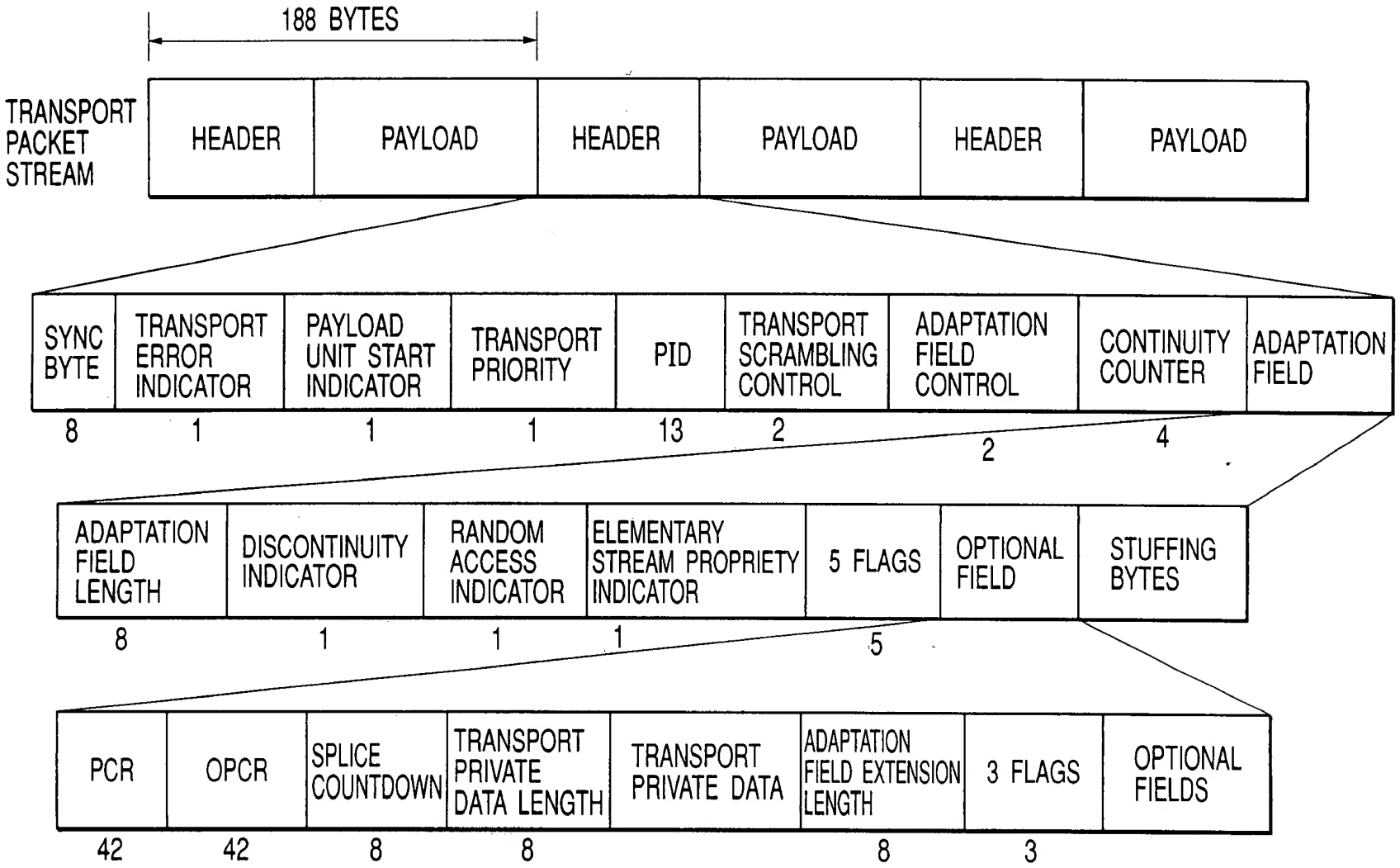

188 BYTES
TRANSPORT PACKET STREAM
HEADER
PAYLOAD
HEADER
PAYLOAD
HEADER
PAYLOAD
SYNC BYTE
TRANSPORT ERROR INDICATOR
PAYLOAD UNIT START INDICATOR
TRANSPORT PRIORITY
PID
TRANSPORT SCRAMBLING CONTROL
ADAPTATION FIELD CONTROL
CONTINUITY COUNTER
ADAPTATION FIELD
8
1
1
1
13
2
2
4
ADAPTATION FIELD LENGTH
DISCONTINUITY INDICATOR
RANDOM ACCESS INDICATOR
ELEMENTARY STREAM PROPRIETY INDICATOR
5 FLAGS
OPTIONAL FIELD
STUFFING BYTES
8
1
1
1
5
PCR
OPCR
SPLICE COUNTDOWN
TRANSPORT PRIVATE DATA LENGTH
TRANSPORT PRIVATE DATA
ADAPTATION FIELD EXTENSION LENGTH
3 FLAGS
OPTIONAL FIELDS
42
42
8
8
8
3

FIG. 2

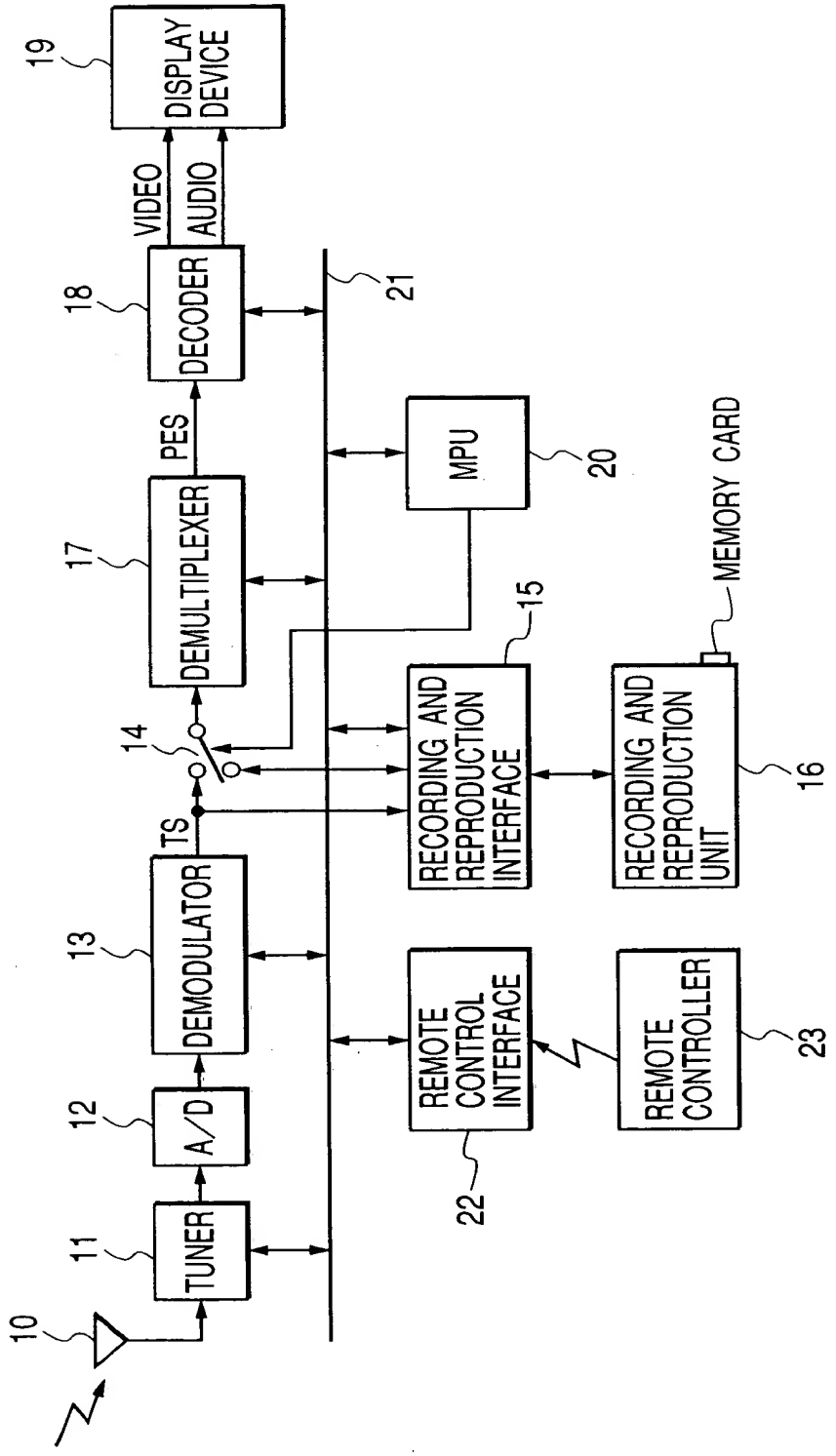

10
11
TUNER
12
A/D
13
DEMODULATOR
TS
14
17
DEMULTIPLEXER
PES
18
DECODER
VIDEO
AUDIO
19
DISPLAY DEVICE
21
MPU
20
15
RECORDING AND REPRODUCTION INTERFACE
MEMORY CARD
RECORDING AND REPRODUCTION UNIT
16
REMOTE CONTROL INTERFACE
22
REMOTE CONTROLLER
23

FIG. 3

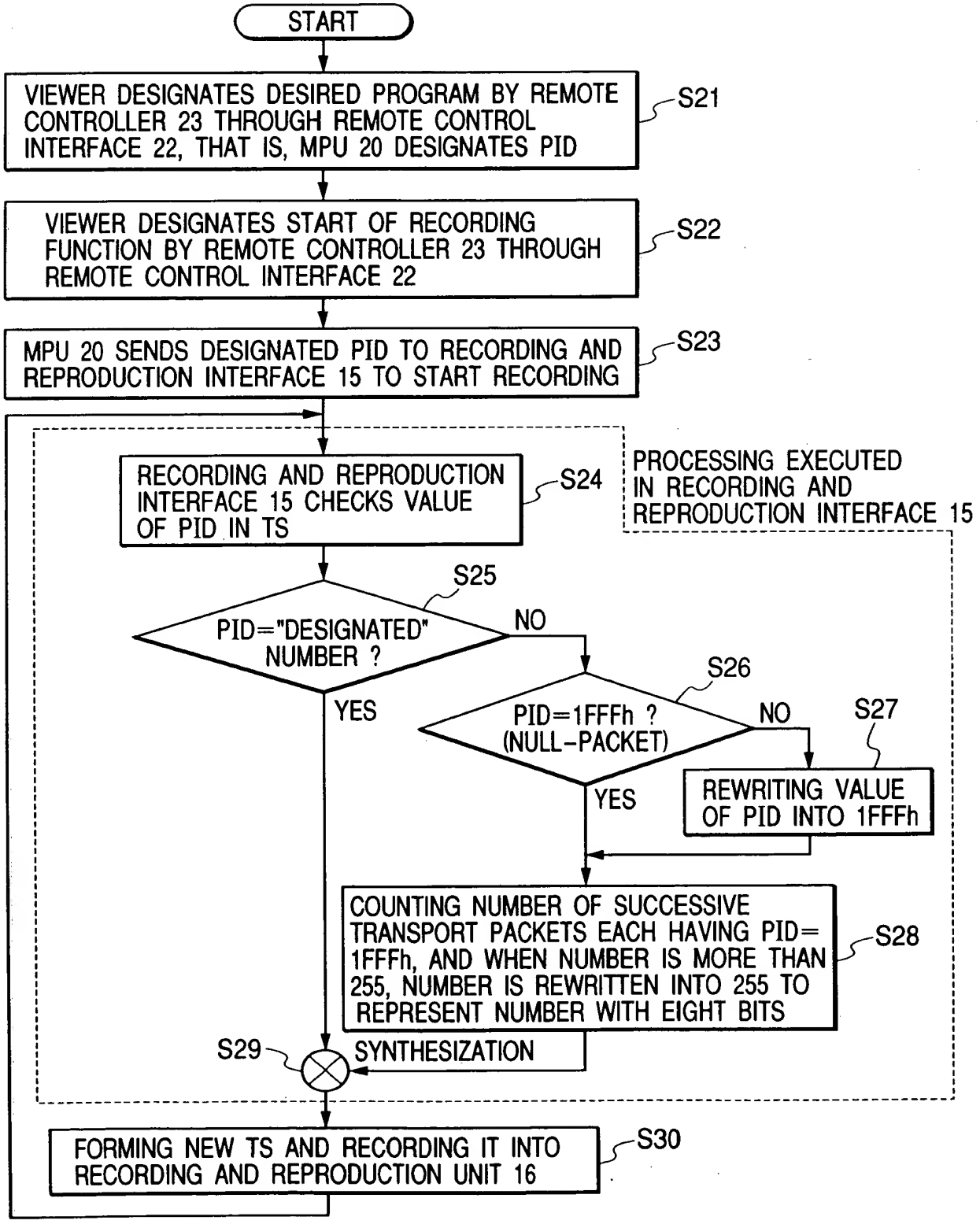

START
VIEWER DESIGNATES DESIRED PROGRAM BY REMOTE CONTROLLER 23 THROUGH REMOTE CONTROL INTERFACE 22, THAT IS, MPU 20 DESIGNATES PID
S21
VIEWER DESIGNATES START OF RECORDING FUNCTION BY REMOTE CONTROLLER 23 THROUGH REMOTE CONTROL INTERFACE 22
S22
MPU 20 SENDS DESIGNATED PID TO RECORDING AND REPRODUCTION INTERFACE 15 TO START RECORDING
S23
PROCESSING EXECUTED IN RECORDING AND REPRODUCTION INTERFACE 15
RECORDING AND REPRODUCTION INTERFACE 15 CHECKS VALUE OF PID IN TS
S24
S25
PID="DESIGNATED" NUMBER ?
NO
YES
S26
PID=1FFFh ? (NULL-PACKET)
NO
YES
S27
REWRITING VALUE OF PID INTO 1FFFh
COUNTING NUMBER OF SUCCESSIVE TRANSPORT PACKETS EACH HAVING PID= 1FFFh, AND WHEN NUMBER IS MORE THAN 255, NUMBER IS REWRITTEN INTO 255 TO REPRESENT NUMBER WITH EIGHT BITS
S28
S29
SYNTHESIZATION
FORMING NEW TS AND RECORDING IT INTO RECORDING AND REPRODUCTION UNIT 16
S30

FIG. 4

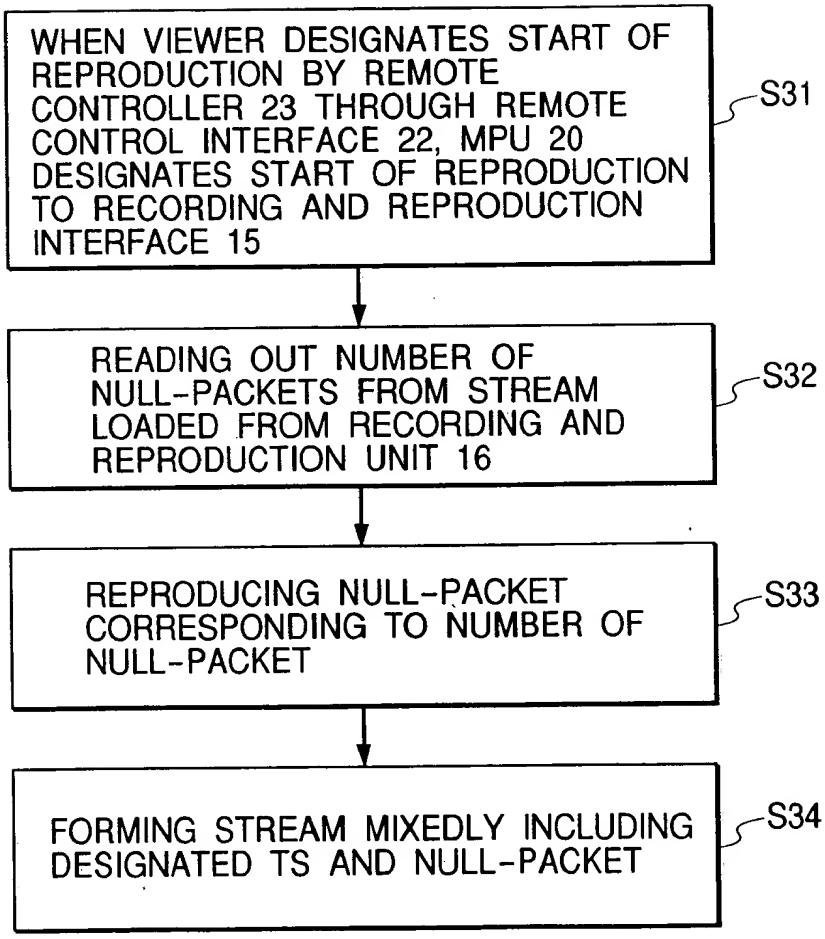

WHEN VIEWER DESIGNATES START OF REPRODUCTION BY REMOTE CONTROLLER 23 THROUGH REMOTE CONTROL INTERFACE 22, MPU 20 DESIGNATES START OF REPRODUCTION TO RECORDING AND REPRODUCTION INTERFACE 15
S31
READING OUT NUMBER OF NULL-PACKETS FROM STREAM LOADED FROM RECORDING AND REPRODUCTION UNIT 16
S32
REPRODUCING NULL-PACKET CORRESPONDING TO NUMBER OF NULL-PACKET
S33
FORMING STREAM MIXEDLY INCLUDING DESIGNATED TS AND NULL-PACKET
S34

FIG. 5

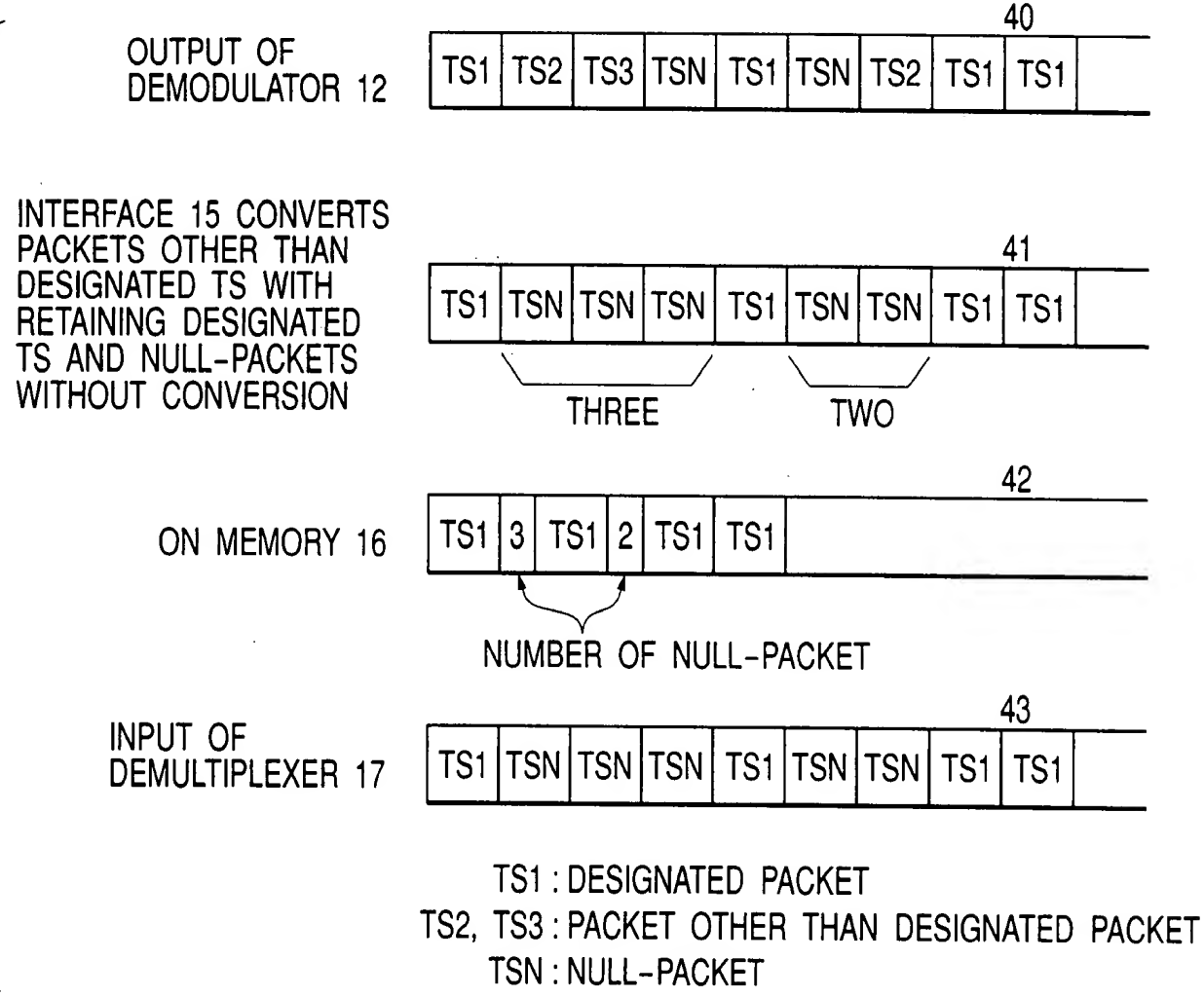

OUTPUT OF DEMODULATOR 12
40
TS1 TS2 TS3 TSN TS1 TSN TS2 TS1 TS1
INTERFACE 15 CONVERTS PACKETS OTHER THAN DESIGNATED TS WITH RETAINING DESIGNATED TS AND NULL-PACKETS WITHOUT CONVERSION
41
TS1 TSN TSN TSN TS1 TSN TSN TS1 TS1
THREE
TWO
ON MEMORY 16
42
TS1 3 TS1 2 TS1 TS1
NUMBER OF NULL-PACKET
INPUT OF DEMULTIPLEXER 17
43
TS1 TSN TSN TSN TS1 TSN TSN TS1 TS1
TS1 : DESIGNATED PACKET
TS2, TS3 : PACKET OTHER THAN DESIGNATED PACKET
TSN : NULL-PACKET

FIG. 6

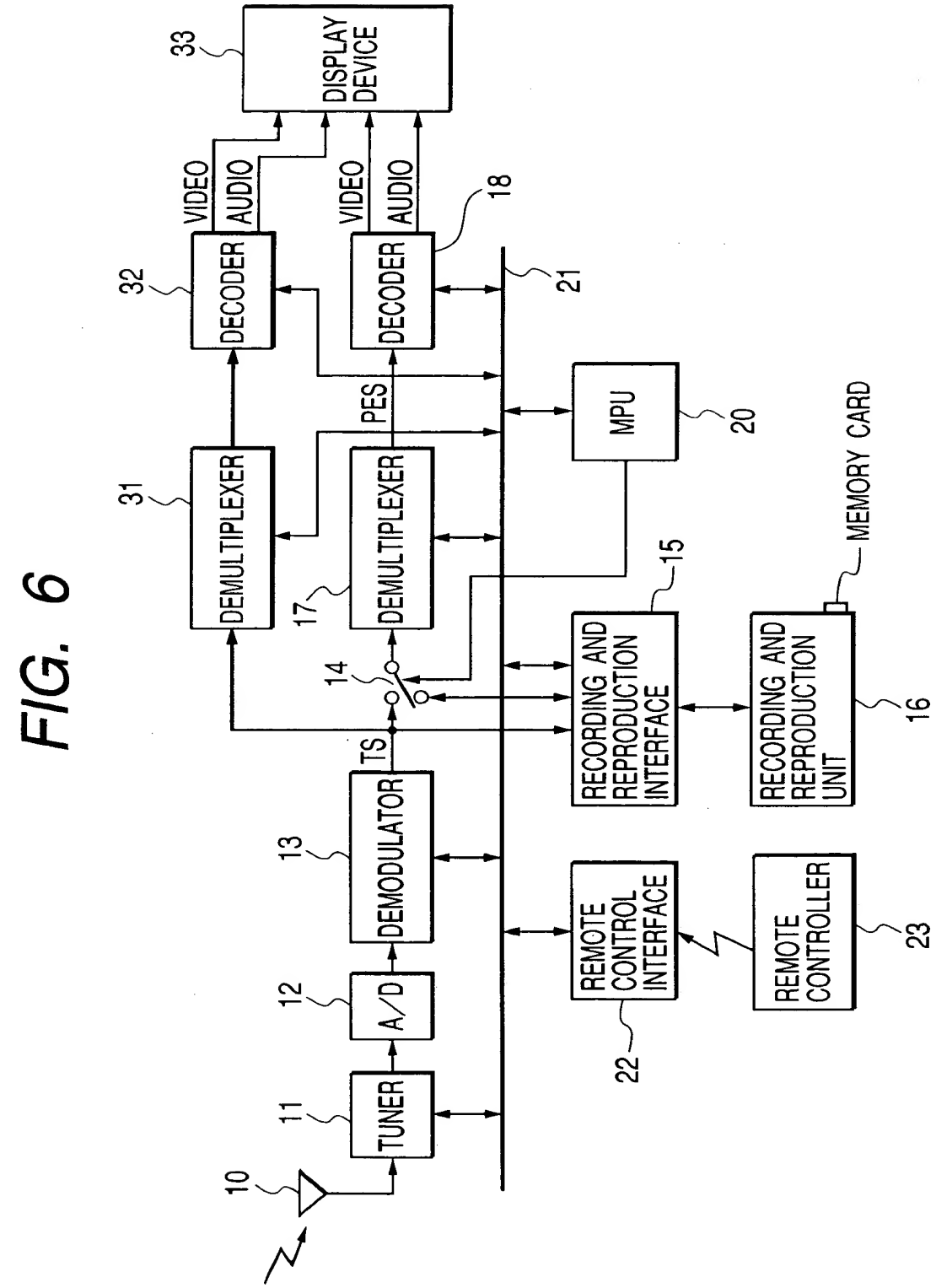

10
11
TUNER
12
A/D
13
DEMODULATOR
TS
14
31
DEMULTIPLEXER
32
DECODER
VIDEO
AUDIO
33
DISPLAY DEVICE
17
DEMULTIPLEXER
PES
18
DECODER
VIDEO
AUDIO
21
MPU
20
RECORDING AND REPRODUCTION INTERFACE
15
RECORDING AND REPRODUCTION UNIT
16
MEMORY CARD
REMOTE CONTROL INTERFACE
22
REMOTE CONTROLLER
23

FIG. 7

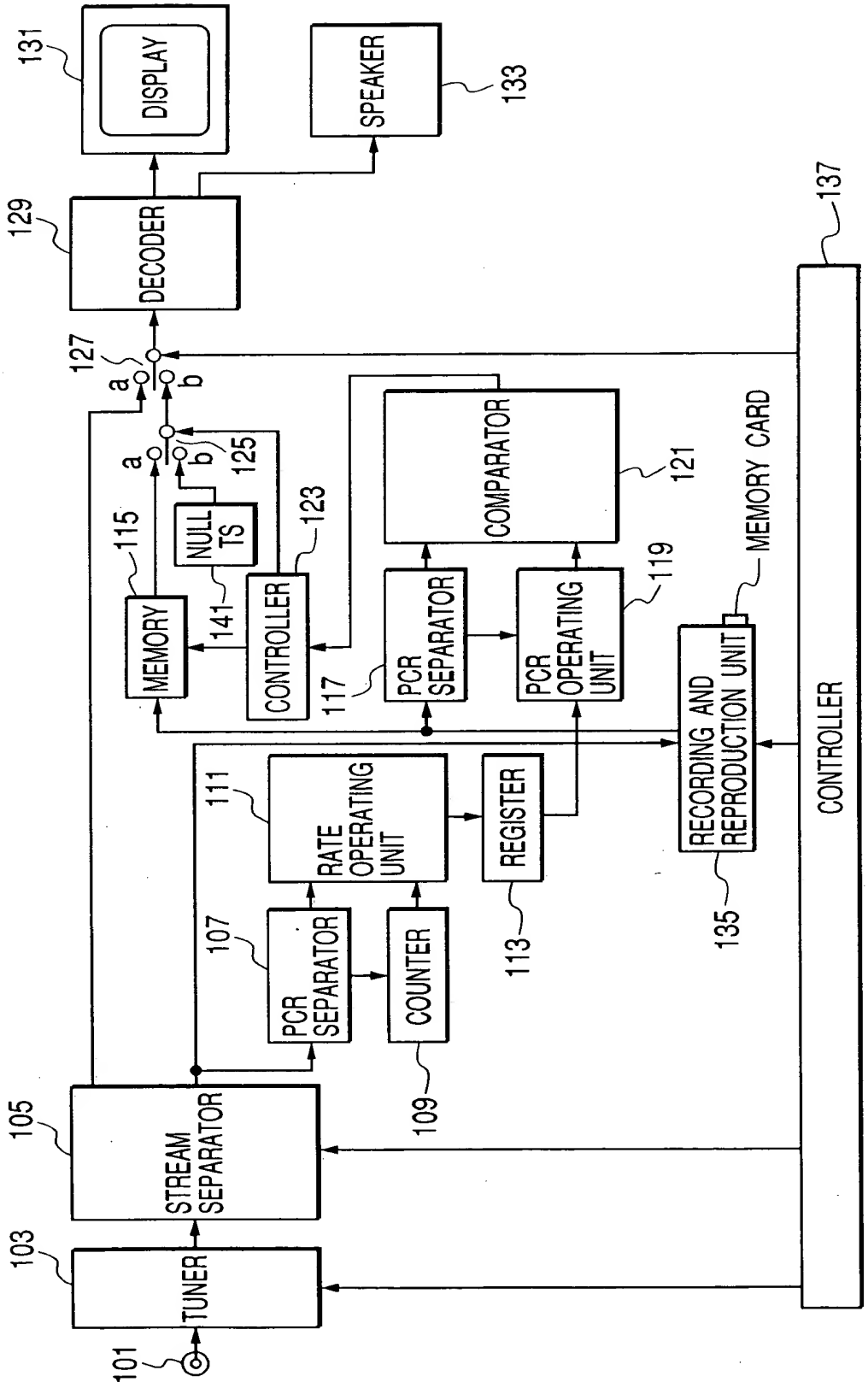

101
TUNER
103
STREAM SEPARATOR
105
PCR SEPARATOR
107
COUNTER
109
RATE OPERATING UNIT
111
REGISTER
113
PCR SEPARATOR
117
PCR OPERATING UNIT
119
COMPARATOR
121
CONTROLLER
123
NULL TS
125
MEMORY
115
141
127
a
b
DECODER
129
DISPLAY
131
SPEAKER
133
RECORDING AND REPRODUCTION UNIT
135
MEMORY CARD
CONTROLLER
137

FIG. 8

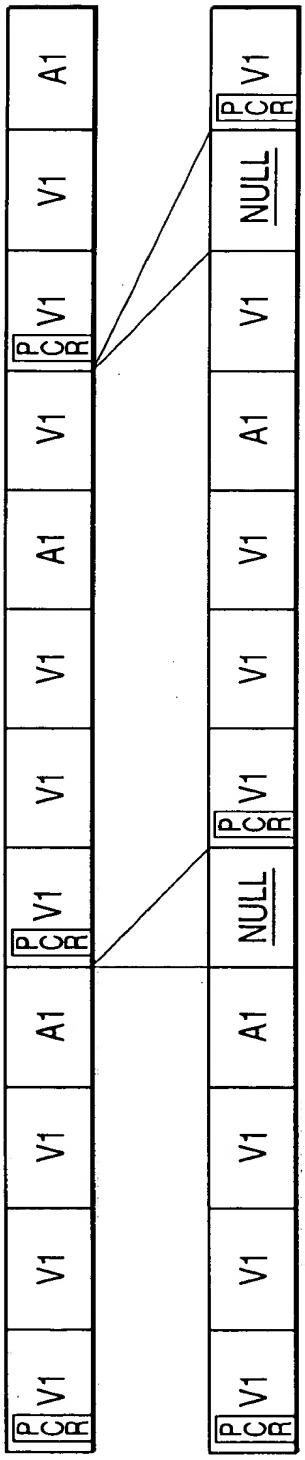
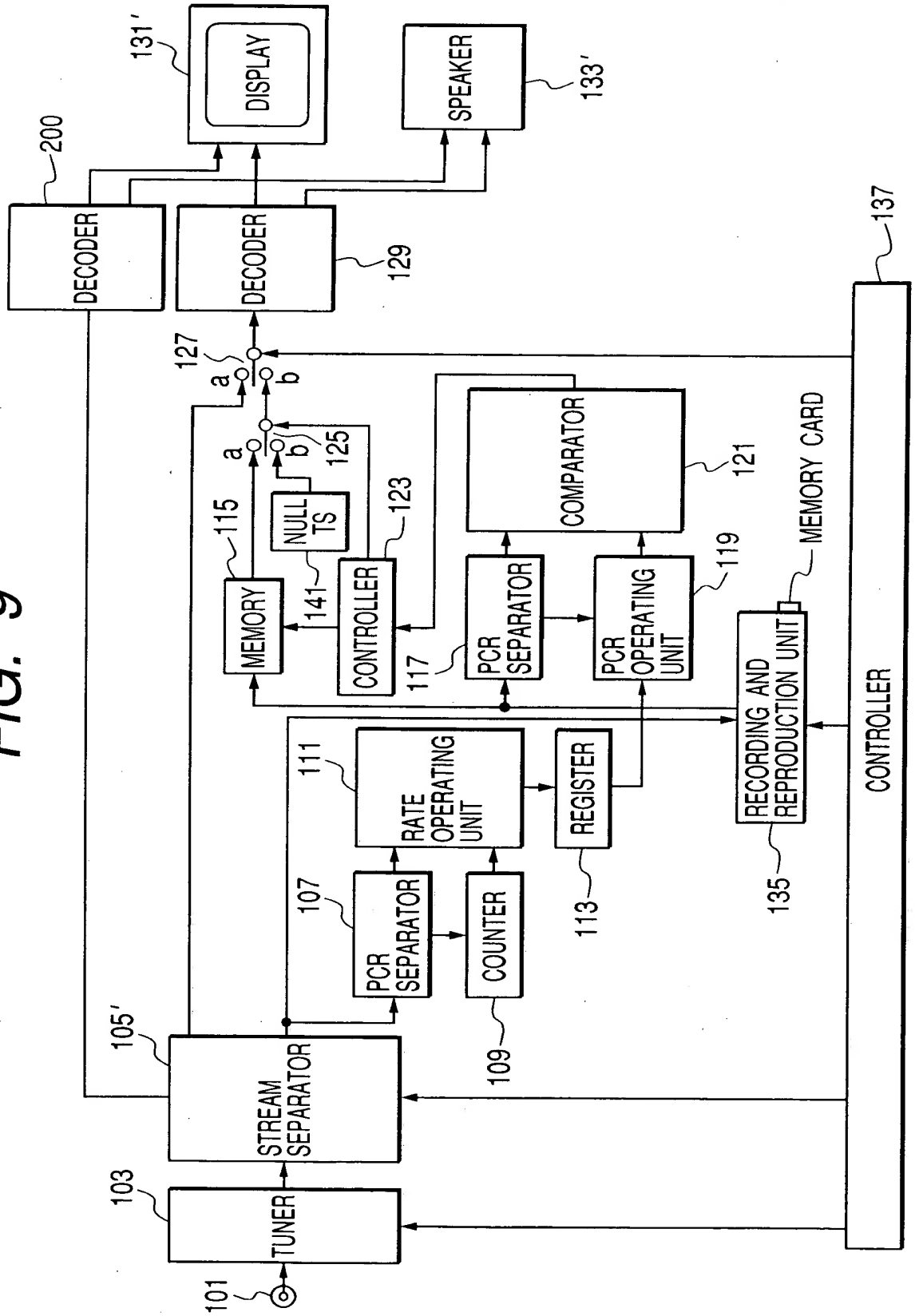

P C R V1
V1
V1
A1
V1
V1
A1
V1
P C R V1
A1
V1
V1
NULL
P C R V1
V1
V1
A1
P C R V1
V1
NULL
V1
V1
A1
P C R V1

FIG. 9


101
TUNER
103
STREAM SEPARATOR
105'
PCR SEPARATOR
107
COUNTER
109
RATE OPERATING UNIT
111
REGISTER
113
PCR SEPARATOR
117
PCR OPERATING UNIT
119
COMPARATOR
121
MEMORY
115
NULL TS
125
CONTROLLER
123
141
127
a
b
DECODER
129
DECODER
200
DISPLAY
131'
SPEAKER
133'
RECORDING AND REPRODUCTION UNIT
135
MEMORY CARD
CONTROLLER
137